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The NanoStrobeX is a universal camera for inline monitoring of contactless dispensing processes. Detection of dosing deviations and errors in real-time.

Suited for a wide range of industries

Our camera systems are extremely universal and can be adapted for many other applications. If your industry is not listed here, please contact us to discuss how our technology can meet your specific requirements.

Biotech

Precision application of laboratory samples onto analysis substrates.

Pharmaceutics

Precise dosing of ingredients in pharmaceutical formulation

Chemistry

Controlled non-contact dosing and mixing of chemical liquids.

Industrial manufacturing

application of adhesives, underfill, solder paste, ... and much more.

What Sets Our System Apart?

NanoStrobeX Dropwatcher Advantages

The NanoStrobeX is designed for inline process monitoring in Real-Time. Due to its small size and intelligent design, the dropwatcher can be easily attached to almost any dispensing system. The inline monitoring of dispensing processes has many advantages and helps you to save cost, increase production times, improve quality and makes a considerable contribution to sustainability.

Accelerating Visibility

Until now, dosing could only be monitored as a result. With the NanoStrobeX, the dosing process is made visible, speeding up the setup, maintenance, and troubleshooting of process issues many times over.

Traceability

Continuous process monitoring enables traceability of dosing for the first time, allowing big data analysis to increase productivity and ensuring sustainable product quality. Returns and batch problems can also be analyzed.

Sustainability

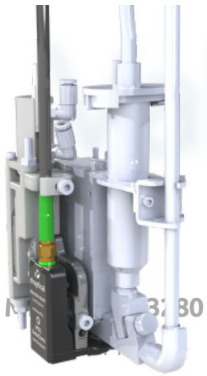
Real-time monitoring detects deviations in the dosing parameters in time and can react immediately. This reduces the scrap rate, positively impacting sustainability and significantly increasing the efficiency and effectiveness of production.

Usability

The NanoStrobeX is designed for plug-and-play, both electrically and mechanically. The software is intuitive to use and runs on the device itself, so the camera can be operated from any device without installation.

Common Valve Adaption

The NanoStrobeX is Ready2Use for all common jet valves. The matching LiftUnit adapter is available as an accessory for every valve. The systems are ideally matched both mechanically and electrically, which enables extremely quick and comfortable integration into existing systems.



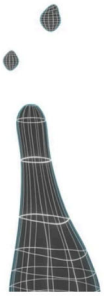
Product Spec for NanoStrobeX Dropwatcher

We are pleased to provide you with comprehensive technical specifications. Please contact us using the contact form below. You will receive the complete PDF with detailed information on all the functions and benefits of our

Feature	NSX-D	NSX-I
Measurement Range	0.1 nl - 50 nl	0.1 nl - 10 nl
Frames per Second (FPS)	up to 300	up to 300
Field of View (FOV)	2 mm x 2 mm	2 mm x 2 mm
Dispensing Gap	> 1.5 mm	< 1.5 mm
Sustainable	✓	✓

Get full data sheet

3D-Drop-Analysis



The 3D drop monitoring enables extremely precise determination of the dispensing volume, which cannot be reached with conventional cameras. At the same time, even hidden satellite droplets are reliably detected. The 3D detection also enables the evaluation of the direction of flight and the expected impact position.

50%

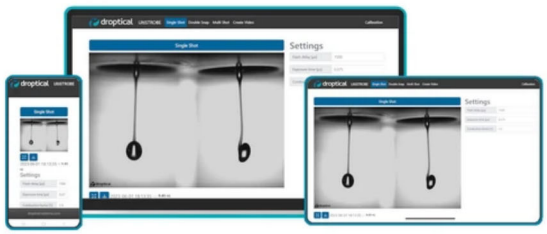
Inline Monitoring

There are many dosing processes that require a very small distance between the nozzle and the substrate. Droptical has various cameras in its portfolio that enable small dosing distances of even less than 1 mm to be captured by the camera from one or even more directions. By reflecting the lighting on the surface, it is possible to observe the area below the camera, so that, for example, the area below the nozzle can also be observed, even though the camera itself is positioned higher up. By specifically illuminating the structures on the surface or parts of the dosing system (e.g. elevations or depressions, components, holes, nozzle, etc.), even poorly lit areas or shadow-producing structures can be reliably illuminated. This is achieved by focused and/or unfocused transmitted light and/or reflected light.

This can be used in all contactless dosing processes (jet dispensing). Examples include underfilling, paste application, filling cavities, gluing, marking or printing, building structures (e.g. 3D printing or additive manufacturing) and many more.

Web-GUI

The AnalysisUnit of the NanoStrobeX has an integrated web server for intuitive process settings. This is used for evaluation functions, evaluation criteria or statistical analyses. The GPIOs or a database connection can also be set. No installation or extensive training is required. All you need for control is a standard browser. The dosing process becomes visible within a few minutes without you having to adapt your electrical wiring.



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Nozzle Monitoring

Liquid residues on the nozzle have a negative effect on the dispensing quality, e.g. by changing the droplet flight direction or the droplet volume. With the NanoStrobeX, the nozzle condition can be

monitored in real time. Cleaning as required saves valuable process time and reduces scrap at the same time.

Accessoires

LiftUnit

Installation made easy! The LiftUnit has two functions. It is used to mechanically adapt the camera to the dosing system and to move the camera between the measuring and service position for easy maintenance of the nozzle.

TriggerAdapter

Plug'n'Play Connector. With the TriggerAdapter, the existing wiring does not need to be changed. It is plugged between the dosing controller and the connection cable and the NanoStrobeX is immediately ready for use.

GaugeAdapter

Calibration made easy. With the plug-in adapter for calibration, the calibration value of the camera can be checked and adjusted in no time at all.

CenterAdapter

Focus on dosing. To ensure that the dosing is perfectly monitored, it should be as close as possible to the camera's focus area. The CenterAdapter helps here for even faster commissioning.

FAQ

Which fluids can be detected with the NanoStrobeX?

All common liquids are suitable. From colourless fluids such as glycerine to adhesives and solder pastes, all liquids are reliably detected. All liquids

NanoStrobeX

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For which dosing distances is the NSX suitable?

What measurement results does the NanoStrobeX camera deliver?

What is the measurement result data output?

Up to what size can droplets and satellites be detected?

What happens if the NanoStrobeX camera becomes dirty?

Can the NanoStrobeX be attached to any JetValve?

Up to what dosing frequency can droplets be detected?

Can a liquid jet also be detected?

Get in Touch

You can reach us anytime via sales@droptical-systems.com

90%

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